disagree that those references, even if combined, would operate as the Examiner contends, Applicants' arguments below are directed solely to traversing the Examiner's conclusions regarding the Murata et al./Manduley et al. combination. Even if the Examiner's statements regarding the various secondary references are correct, it is the position of the Applicants that the basic Murata et al./Manduley et al. combination does not provide the teachings as contended by the Examiner, and therefore even if the Murata et al./Manduley et al. combination were modified in accordance with the teachings of one or more of the secondary references, neither a method nor an apparatus, as set forth in the claims against which those secondary references were applied, would result.

As explained in Applicants' previous response, in the method and apparatus of the present invention, pieces of mail are conveyed toward and away from a weighing pan with the conveying speed being regulated in an entry region, preceding the weighing pan, and in a discharge region, following the weighing pan. While the postal item is on the weighing pan, however, regulation of the conveying speed is deactivated during a measuring time range wherein a weight measurement of the postal item is obtained. Independent claims 1 and 8, however, make clear that deactivating regulation of the conveying speed does *not* mean stopping the postal item on the weighing pan. Each of independent claim 1 expressly states that despite the regulation of the conveying speed being deactivated, the weight measurement is obtained with the postal item moving at a speed other than the predetermined regulated conveying speed. Since both independent claims 1 and 8 expressly state that the weight measurement is obtained while the postal item is *moving*, this precludes either of those claims from reading on a static weighing system or

technique, wherein the item to be weighed is brought to a standstill while the weight measurement is obtained.

As also explained in Applicants' previous response, those of ordinary skill in the field of weighing, and in particular in the field of weighing postal items, recognize that there are two categories of scales, namely a static scale and a dynamic scale. The fundamental manners of operation of these two types of scales contradict each other, and therefore it would be contrary to the conventional thinking in this art to "mix" teachings relating to static weighing with teachings related to dynamic weighing. The reason for conducting static weighing is the belief that a more accurate weight measurement can be made if the postal item is motionless during the weight measurement. Bringing the item to be weighed to a standstill, however, reduces the overall throughput speed with which a number of successive items can be weighed. Dynamic weighing, by contrast, does not involve a stoppage of the item during weighing, but continuously moves a series of items across a weighing pan without stopping. The weight measurement may be slightly inaccurate as a result of the items being in motion during the weight measurement, however, this slight inaccuracy is accepted as a tradeoff to keeping the throughput rate high.

The method and apparatus of the present invention represent an effort to achieve the advantages associated with static weighing and dynamic weighing, while avoiding the disadvantages. Although the postal items in the inventive method and apparatus do not come to a stop on the weighing pan, the regulation of the conveying speed, which occurs before and after the item is on the weighing pan, is deactivated so that the item, while not coming to a stop, nevertheless can move across the weighing pan at a speed that is different from the regulated conveying

speed. This allows, for example, heavier items to be moved more slowly across the weighing pan, but without stopping. It is known that heavier items are more prone (compared to lighter items) to creating oscillations on the weighing pan, which can falsify the weight measurement, and these oscillations are proportional to the speed of movement of the item. This is one reason why static weighing is employed in the prior art. The prior art approach, however, has been to bring the item to be weighed to a complete stop in order to avoid such oscillations. The present inventors have recognized that it is not necessary to bring the item to a complete stop in order to improve the accuracy of the weight measurement; it is sufficient to deactivate the normally-employed regulation of the conveying speed to allow the item, if necessary, to be moved at a slower speed across the weighing pan, but without stopping movement of the item. Thus, the accuracy of the weight measurement is improved, but because there is no stoppage of the item on the weighing pan, the throughput rate is not reduced to the same extent as would be the case if static weighing were employed.

Neither of the Murata et al. or Manduley et al. references provides any teachings that depart from the above-discussed conventional thinking of conducting either static weighing or dynamic weighing as mutually exclusive techniques.

In the Murata et al. reference, a weighing conveyor 1 is disposed between a feeder conveyor 2 and a discharge conveyor 3. As explained in the Murata et al. reference at column 2, lines 13-18, the system is operated either in a dynamic weighing mode or in a static weighing mode, which is consistent with the above-discussed conventional thinking. As explained in conjunction with the flowchart of Figure 4 in the paragraph beginning at column 3, line 34 of the Murata et al.

reference, after an item is moved from the feeder conveyor 2 onto the weighing conveyor 1, a determination is made as to whether a stabilization condition is satisfied. If the stabilization condition is satisfied the item is weighed and there is no alteration or modification of the conveying speed of the weighing conveyor 1. If the stabilization condition is not satisfied, the weighing conveyor 1 comes to a complete stop and the item is maintained on the weighing conveyor 1 in this stopped condition until the stabilization condition is satisfied. This is explicitly stated in the Murata et al. reference at column 3, lines 51-63.

There is no teaching whatsoever in the Murata et al. reference to deactivate regulation of the conveying speed of the item on the weighing conveyor 1 while obtaining a weight measurement of the item on the weighing conveyor 1 with the item still moving. In the Murata et al. system, the item either moves across the weighing conveyor 1 with no change whatsoever in the conveying speed (dynamic mode) or the weighing conveyor 1 is stopped and the item is weighed in this stopped condition (static weighing).

Although the control unit 30 in the Murata et al. reference is stated to control the respective drive rollers of each of the weighing conveyor 1, the feeder conveyor 2 and the discharge conveyor 3, there is no teaching whatsoever in the Murata et al. reference that this control unit is operable to deactivate the conveyor speed regulation to obtain a late measurement while the item is still moving on the weighing conveyor 1. As noted above, either there is no deactivation whatsoever of the regulation of the conveying speed (dynamic weighing), or there is a complete stoppage of the conveying speed (static weighing). These are the only two alternatives taught in the Murata et al. reference.

This is made clear by looking at the flowchart of Figure 4 itself. In the upper loop, the stability condition is tested in block S2, the flag F_A is set to a value of "1" and then an inquiry is made in block S5 as to whether an object is present on the weighing conveyor 1.

The next block S6 in Figure 4 of the Murata et al. reference is actually incorrect, and is not consistent with the aforementioned passage in column 3, beginning at line 34. As stated at column 3, lines 52-56, when the presence of an object has been ascertained (yes in S5), the control unit 30 examines whether the weight stability flag S_A indicates a stable position or not in block S6. If the flag value F_A is found to be other than 1, indicating that the weight signals are still unstable, which is stated in the aforementioned passage to result in a "no" answer in block S6, the motor 1 is stopped in block S7, thereby stopping the conveyor belt 10 of the weighing conveyor 1, and this stopped condition is maintained while the control unit 30 continues to receive weight signals in block S8.

To be consistent with this written description, the block S6 in Figure 4 should represent the inquiry $F_A = 1$, in which case a "yes" answer causes the weight signals to be read in block S12, and a "no" answer causes stoppage of the motor in block S7.

In any event, the intended manner of operation of the system in the Murata et al. reference is clear, and there is no possibility taught in that reference of deactivating the regulation of conveying speed while obtaining a weight measurement of an item while the item is still moving, as set forth in independent claims 1 and 8 of the present application.

The Manduley et al. reference is exclusively a static weighing system. There is no dynamic weighing whatsoever taught in the Manduley et al. reference. In every instance, an item to be weighed is brought to a complete stop while the weight measurement is obtained, and is then permitted to proceed along the conveying path. Stoppage of the item to be weighed occurs in the manner described in Figures 3a through 3d of the Manduley et al. reference, wherein the fingers 37, 38 and 39 are opened and closed to intermittently hold and release an item to be weighed. When the item 70 is moved onto the weighing pan, the fingers are closed to stop movement of the item, as indicated in Figure 3a. The fingers are then opened to permit the item to rest undisturbed on the weighing pan while the weight measurement is made, as shown in Figure 3b. After completion of the weighing, lever arms 74 are operated to form a nip in which the item 70 is held, as shown in Figure 3c, and roller surfaces 58 are then operated to eject the item 70 from the weighing pan, as shown in Figure 3d. This is also clearly indicated in the time chart shown in Figure 4, wherein the bar representing the weighing time begins with the vertical-line designated as "fingers closing (41)" and ending with the vertical line labeled "end weigh ejector (58) drives ½" envelope. This sequence also is described in the written portion of the Manduley et al. reference, beginning at column 9, line 19.

The Manduley et al. reference, therefore, is exclusively directed to static weighing, and teaches that no movement whatsoever of the item being weighed should occur during the weight measurement.

Modifying the Murata et al. reference in accordance with the teachings of Manduley et al., therefore would merely result in the mechanism disclosed in the Manduley et al. reference being used instead of the conveyor belt in Murata et al. in

order to bring the item to a complete stop while the weighing measurement is made. Modifying Murata et al. in accordance with the teachings of Manduley et al. would *not* result in a system wherein regulation of the conveying speed is deactivated while the item is on the weighing pan, and obtaining a weight measurement while the item is still moving on the weighing pan as explicitly set forth in claims 1 and 8.

The above discussion is sufficient to rebut the rejection of all of the claims of the present application since, as noted above, all of those rejections rely on the combination of Murata et al. and Manduley et al. operating as proposed by the Examiner, but this proposed manner of operation is not comparable to the method and apparatus of the claims, for the above reasons. Nevertheless, independent claim 8 was rejected with additional reliance on the Feinland et al. reference, but the Examiner merely relied on that reference as disclosing a weighing cell. For the reasons discussed above, even if the Murata et al./Manduley et al. combination were further modified to provide a weighing cell in accordance with the teachings of Feinland et al., an apparatus as set forth in claim 8 still would not result.

For the reasons also discussed above, Applicants respectfully submit that an individual discussion of the further secondary references relied upon by the Examiner would be superfluous. All of the rejections are submitted to be overcome by the above discussion relating to the Murata et al./Manduley et al. combination.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Submitted by,

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